

ABSTRACT

[0046] An amplifier is configured to provide both common-mode and differential-mode compensation to ensure stability in telecommunications circuits or other circuits where both common mode and differential mode signal paths are provided. The amplifier includes two interconnected operational amplifiers AMP_A and AMP_B . Common mode compensation is provided by connecting one or more capacitors with a total value C_{COMMON} connected from a gain node at the input of an inverter in one of the amplifiers AMP_A or AMP_B to the output of the inverter in the other amplifier. Differential mode compensation can be provided by connecting a capacitor with value C_{COMP} at the gain node of each of the amplifiers AMP_A or AMP_B . Alternatively, both differential mode and Miller effect compensation can be provided by connecting one or more capacitors with total value C_{COMP} from the input to the output of components forming the inverter in each of the amplifiers AMP_A and AMP_B . As a further alternative, differential mode compensation can be provided independent of common mode compensation by connecting a capacitor with value C_{DIFF} between the outputs of the inverters of the amplifiers AMP_A and AMP_B .